

and 1b attached hereto.

REMARKS

Applicants have enclosed corrected informal drawings of Figures 1a and 1b.

Applicants have also enclosed hand amended pages showing the corrections for the Examiner's convenience. The hand amended pages are captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE". Applicants will file formal drawings of all figures at a later date.

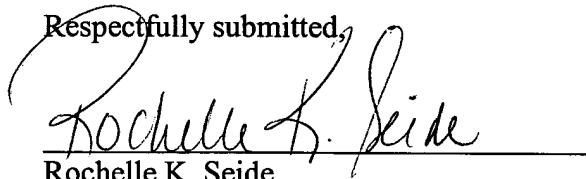
In the Wild Boar sequence in the original version of Figure 1a, two blocks of ten nucleotides were inadvertently swapped. Thus, nucleotide numbers 68-77 and 78-87 appeared in the wrong order. Amendment of Figure 1a to correct this defect is supported by the specification as originally filed at page 68, lines 28-30.

In the original version of Figure 1b, the second amino acid in the Wild Boar sequence was inadvertently identified as "N", i.e. asparagine. The specification as originally filed indicates that Figure 1b shows the "derived amino acid sequence ... of the porcine aMSH-R gene" at page 25, lines 2-3. The original paper sequence listing filed concurrently with the original specification indicated that the codon corresponding to the amino acid at position two is GAC which encodes aspartic acid (D), not asparagine. *See e.g.* Seq ID No. 37, positions 162-164.

These amendments to the figures are fully supported by the application as filed and do not constitute new matter. These amendments bring Figures 1a and 1b into conformity with the Substitute Sequence Listing filed on June 1, 2001.

Applicants do not believe any fee is due with this submission. However, please charge any fee required for this filing overpayment to Deposit Account No. 02-4377. Two copies of this paper are enclosed.

Respectfully submitted,



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Enclosures



VERSION WITH MARKINGS TO SHOW CHANGES MADE

FIG. 1

a: Nucleotide sequence

| | | |
|------------|---|-----------|
| Wild Boar | CTCCCTGCTCCCTGCTCCCTGGCGGGACG | 1 |
| Meishan | ATG CCT GTG CTT GGC CCG GAG AGG | 27 |
| Pietrain | ..... | ..... |
| Wild Boar | CTG CTG GCT TCC CTC AGC TCC GCG CCC CCA GCC GCC CCC | 75 |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Wild Boar | ..... | ..... |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Wild Boar | ACG CCT CGG GCT CAG ACC AAC CAG ACG GGC CCC CAG TGC CTG GAG GTG TCC | 126 |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Wildboar | ATT CCC GAC GGG CTC TTC CTC AGC CTG GGG CTG GTG AGC CTC GTG GAG AAC | 177 |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Largewhite | ..... | ..... |
| Hampshire | ..... | ..... |
| Duroc | ..... | ..... |
| Wildboar | GTG CTG GTG GTG GCC GCC ATC GCC AAG AAC CGC AAC CTG CAC TCG CCC ATG | 228 |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Largewhite | ..... | ..... |
| Hampshire | ..... | ..... |
| Duroc | ..... | ..... |
| Wildboar | TAC TAC TTC GTC TGC CTG GCC GTG TCG GAC CTG CTG GTG AGC GTG AGC | 279 |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Largewhite | ..... | ..... |
| Hampshire | ..... | ..... |
| Duroc | ..... | ..... |
| Wildboar | AAC GTG CTG GAG ACG GCC GTG CTG CTG CTG GAG GCG GGC GGC CTG GCC | 329 |
| Meishan | ... A ... | ... C ... |
| Pietrain | ..... | ..... |
| Largewhite | ..... | ..... |
| Hampshire | ..... | ..... |
| Duroc | ..... | ..... |
| Wildboar | GCC CAG GCC GCC GTG GTG CAG CAG CTG GAC AAT GTC ATG GAC GTG CTC ATC | 380 |
| Meishan | ..... | ..... |
| Pietrain | ..... | ..... |
| Largewhite | ..... | ..... |
| Hampshire | ..... | ..... |
| Duroc | ..... | ..... |

→ boxed should be swapped

VERSION WITH MARKINGS TO SHOW CHANGES MADE

431
Wildboar TGC GGC TCC ATG GTG TCC AGC CTC TGC TTC CTG GGC GCC ATC GGC GTG GAC
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

483
Wildboar CGC TAC GTG TCC ATC TTC TAC GCG CTG CGC TAC CAC AGC ATC GTG ACG CTG
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

534
Wildboar CCC CGC GCG GGG CGG GCT ATC GCG GCG ATC TGG GCG GGC AGC GTG CTC TCC
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ... T ...

585
Wildboar AGC ACC CTC TTC ATC GCC TAC TAC CAC CAC ACG GCC GTC CTG CTG GGC CTC
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

636
Wildboar GTC AGC TTC TTC GTG GCC ATG CTG GCG CTC ATG GCG GTA CTG TAC GTC CAC
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

687
Wildboar ATG CTG GCC CGG GCC TGC CAG CAC GGC CGG CAC ATC GCC CGG CTC CAC AAG
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

738
Wildboar ACG CAG CAC CCC ACC CGC CAG GGC TGC GGC CTC AAG GGC CGG GCC ACC CTC
Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ... A ...

FIG. 1 CONT'D

VERSION WITH MARKINGS TO SHOW CHANGES MADE

789
 Wildboar ACC ATC CTG CTG GGC GTC TTC CTC CTC TGC TGG GCA CCC TTC TTC CTG CAC
 Meishan
 Pietrain
 Largewhite
 Hampshire
 Duroc

840
 Wildboar CTC TCC CTC GTC GTC CTC TGC CCC CAG CAC CCC ACC TGC GGC TGC GTC TTC
 Meishan
 Pietrain
 Largewhite
 Hampshire
 Duroc

885
 Wildboar AAG AAC GTC AAC CTC TTT CTG GCC CTC GTC ATC TGC AAC TCC ATC
 Meishan
 Pietrain
 Largewhite
 Hampshire
 Duroc

b. Amino acid sequence

D 99
 Wildboar ?P^DGLFLSLG LVSLVENVLV VAAIAKNRNL HSPMYYFVCC LAVSDILLVSV SNVLETAVLL
 Meishan
 Largewhite
 Hampshire
 Duroc

159
 Wildboar LLEAGALAAQ AAVVQQLDNV MDVЛИCГSMV SSLCFLGAIA VDRYVSIFYA LRYHSIVTLP
 Meishan
 Largewhite
 Hampshire
 Duroc

219
 Wildboar RAGRAIAAIW AGSVLSSTLF IAYYHHTAVL LGLVSFFVAM LALMAVLYVH MLARACQHGR
 Meishan
 Largewhite
 Hampshire
 Duroc

279
 Wildboar HIARLHKTOH PTRQGCGLKG AATLTILLGV FLLCWAPFFL HLSLVVLCPO HPTCGCVFKN
 Meishan
 Largewhite
 Hampshire
 Duroc

Wildboar VNLFLALVIC NSI
 Meishan
 Largewhite
 Hampshire
 Duroc

| | | |
|------------|---|-----|
| Wildboar | TGC GGC TCC ATG GTG TCC AGC CTC TGC TTC CTG GGC GCC ATC GGC GTG GAC | 431 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | .... |  |
| Wildboar | CGC TAC GTG TCC ATC TTC TAC GCG CTG CGC TAC CAC AGC ATC GTG ACG CTG | 483 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | .... |  |
| Wildboar | CCC CGC GCG GGG CGG GCT ATC GCG GCG ATC TGG GCG GGC AGC GTG CTC TCC | 534 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | T | |
| Wildboar | AGC ACC CTC TTC ATC GCC TAC TAC CAC CAC ACG GCC GTC CTG CTG GGC CTC | 585 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | .... |  |
| Wildboar | GTC AGC TTC TTC GTG GCC ATG CTG GCG CTC ATG GCG GTA CTG TAC GTC CAC | 636 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | .... |  |
| Wildboar | ATG CTG GCC CGG GCC TGC CAG CAC GGC CGG CAC ATC GCC CGG CTC CAC AAG | 687 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | .... |  |
| Wildboar | ACG CAG CAC CCC ACC CGC CAG GGC TGC GGC CTC AAG GGC CGG GCC ACC CTC | 738 |
| Meishan | .... |  |
| Pietrain | .... |  |
| Largewhite | .... |  |
| Hampshire | .... |  |
| Duroc | A | |

FIG. 1 CONT'D

Wildboar ACC ATC CTG CTG GGC GTC TTC CTC CTC TGC TGG GCA CCC TTC TTC CTG CAC 789

Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

Wildboar CTC TCC CTC GTC GTC CTC TGC CCC CAG CAC CCC ACC TGC GGC TGC GTC TTC 840

Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

Wildboar AAG AAC GTC AAC CTC TTT CTG GCC CTC GTC ATC TGC AAC TCC ATC 885

Meishan ...
Pietrain ...
Largewhite ...
Hampshire ...
Duroc ...

b. Amino acid sequence

Wildboar ?PDGLFLSLG LVSLVENVLV VAAIAKNRNL HSPMYYFVCC LAVSQILVSV SNVLETAVLL 99
Meishan ...
Largewhite ...
Hampshire ...
Duroc ...

Wildboar LLEAGALAAQ AAVVQQLDNV MDVLIICGSMV SSLCFLGAIA VDORYVSIFYA LRYHSIVTLP 159
Meishan ...
Largewhite ...
Hampshire ...
Duroc ...

Wildboar RAGRAIAAIW AGSVLSSTLF IAYYHHTAVL LGLVSFFVAM LALMAVLYVH MLARACOHGR 219
Meishan ...
Largewhite ...
Hampshire ...
Duroc V...

Wildboar HIARLHKTQH PTROGCGGLKG AATLTILLGV FLLCWAPFFL HLLSLVVLCPQ KPTCCCVFKN 279
Meishan ...
Largewhite ...
Hampshire ...
Duroc T...

Wildboar VNLFLALVIC NSI
Meishan ...
Largewhite ...
Hampshire ...
Duroc ...

FIG. 1 CON'T

FIG. 1

a: Nucleotide sequence

| | | | | | |
|------------|---|-----|-------------------------------------|-------|----|
| Wild Boar | CTCCCTGCTCCCTGCTCCCTGGCGGGACG | 1 | ATG CCT GTG CTT GGC CCC GAG AGG | AGG | 27 |
| Meishan | ..... |  | ..... | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Wild Boar | CTG CTG GCT TCC CTC AGC TCC GCG CCC CCA GCC CCC | 75 | CGC CTC GCG | ..... |  |
| Meishan | ..... |  | ..... | ..... |  |
| Pietrain | ..... |  | ..... | ..... | CC |
| Wild Boar | CTG GCC GCC AAC CAG ACC AAC CAG CAG ACG | 126 | GGC CCC CAG TGC CTG GAG GTG TCC | ..... |  |
| Meishan | ..... |  | ..... | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Wildboar | ATT CCC GAC GGG CTC TTC CTC AGC CTG GGG CTG GTG | 177 | AGC CTC GTG GAC AAC | ..... |  |
| Meishan | ..... |  | ..... | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Largewhite | ..... |  | ..... | ..... |  |
| Hampshire | ..... |  | ..... | ..... |  |
| Duroc | ..... |  | ..... | ..... |  |
| Wildboar | GTG CTG GTG CTG GCC ATC GCC AAG AAC CGC AAC | 228 | CTG CAC TCG CCC ATG | ..... |  |
| Meishan | ..... |  | ..... | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Largewhite | ..... |  | ..... | ..... |  |
| Hampshire | ..... |  | ..... | ..... |  |
| Duroc | ..... |  | ..... | ..... |  |
| Wildboar | TAC TAC TTC GTC TGC CTG GCC GTG TCG GAC | 279 | CTG CTG GTG AGC GTG AGC | ..... |  |
| Meishan | ..... |  | ..... | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Largewhite | ..... |  | ..... | ..... |  |
| Hampshire | ..... |  | ..... | ..... |  |
| Duroc | ..... |  | ..... | ..... |  |
| Wildboar | AAC GTG CTG GAG ACG GCC GTG CTG CTG | 329 | CTG GAG GCG GGC GCC CTG GCC | ..... |  |
| Meishan | A .. | | C .. | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Largewhite | ..... |  | ..... | ..... |  |
| Hampshire | ..... |  | ..... | ..... |  |
| Duroc | ..... |  | ..... | ..... |  |
| Wildboar | GCC CAG GCC GCC GTG GTG CAG CAG | 380 | CTG GAC AAT GTC ATG GAC GTG CTC ATC | ..... |  |
| Meishan | ..... |  | ..... C .. | ..... |  |
| Pietrain | ..... |  | ..... | ..... |  |
| Largewhite | ..... |  | ..... | ..... |  |
| Hampshire | ..... |  | ..... | ..... |  |
| Duroc | ..... |  | ..... | ..... |  |